

WHAT IS CLAIMED IS:

1. A method for protecting an avian host from TRT and/or TRT or SHS-related respiratory distress comprising administering a vaccine *in ovo* to a fertile egg containing an embryo of the avian host, said vaccine comprising an immunogenically-effective amount of a live, attenuated strain of turkey rhinotracheitis virus in the approximate range of from about $10^{3.2}$ TCID₅₀ per egg to about $10^{4.5}$ TCID₅₀ per egg, wherein said vaccine is administered on or before day 24 of incubation.

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2. The method of Claim 1, wherein said immunogenically-effective amount is administered in a suitable vehicle of approximately 0.05 to 0.1 ml per egg.

15 3. The method of Claim 2, wherein the immunogenically-effective amount is about $10^{3.2}$ TCID₅₀ per egg.

4. The method of Claim 2, wherein the immunogenically-effective amount is about $10^{4.2}$ TCID₅₀ per egg.

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5. The method of Claim 1, wherein said avian host is a turkey or chicken embryo.

6. The method of Claim 5, wherein said administration occurs on approximately day 18 of incubation (chicken) or approximately day 24 of incubation (turkey).

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7. The method of Claim 3, wherein the avian host is either a turkey or a chicken embryo.

8. The method of Claim 7, wherein the avian host is a turkey embryo.

9. The method of Claim 7, wherein the avian host is a chicken
5 embryo.

10. A process for protecting turkeys and chickens from exposure to
virulent strains of turkey rhinotracheitis virus, comprising
administering *in ovo* to fertile eggs a vaccine comprising, on a per
egg basis, an immunogenically-effective amount of a live, avirulent
strain of turkey rhinotracheitis virus, wherein said administration
results in a decrease in the percentage of eggs that hatch of less
than about 2%.

15 11. The process of Claim 10, wherein the immunogenically-effective
amount is in the approximate range of from about $10^{3.2}$ TCID₅₀ per
egg to about $10^{4.2}$ TCID₅₀ per egg.

20 12. An *in ovo* vaccine for protecting turkeys and/or chickens from
exposure to virulent turkey rhinotracheitis virus, comprising a
buffered solution containing, on a per egg basis, a live, attenuated
strain of turkey rhinotracheitis virus in an immunogenically-
effective amount of from about $10^{3.2}$ TCID₅₀ to about $10^{4.2}$
TCID₅₀.

25 13. The vaccine of Claim 11, wherein the immunogenically-effective
amount is efficacious against subsequent post-hatch exposure of
the turkey and/or the chicken to virulent turkey rhinotracheitis virus;
and produces substantially no decrease in the percentage of *in*

ovo vaccinated turkey and/or chicken eggs that hatch upon the expiration of the incubation period.

14. The vaccine of Claim 13, wherein the immunogenically-effective
5 amount is about $10^{4.2}$ TCID₅₀.

15. A method for inoculating poultry against turkey rhinotracheitis
disease which comprises administering an immunologically
effective amount of a live, attenuated strain of TRT virus in a
10 pharmaceutically acceptable carrier *in ovo* within the range of at
least about $10^{3.2}$ TCID₅₀ per egg to about $10^{4.2}$ TCID₅₀ per egg.

16. The method of Claim 15, which further comprises administering
together with said TRT at least one other vaccine selected from
15 the group consisting of Newcastle Disease vaccine, and infectious
bursal disease vaccine.

17. The method of Claim 16, further comprising administering at least
one vaccine selected from the group consisting of infectious
20 bronchitis vaccine and Marek's disease vaccine, wherein said
vaccine is administered *post-in ovo*.

18. The method of claim 17, wherein said *post-in ovo* vaccine is
administered at approximately day 1 of age.
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19. The method of Claim 15, wherein said method results in
substantially no decrease in the number of eggs that hatch.

20. The method of Claim 15, wherein said method produces a decrease in the percentage of eggs that hatch of less than about 5%.

5 21. The method of Claim 21, wherein said method produces a decrease in the percentage of eggs that hatch of less than about 1%.

10 22. A method of providing elevated titers to TRTV, which comprises formulating an *in ovo* vaccine of attenuated TRTV antigen, and administering said vaccine so as to provide a TCID₅₀ in the range of about 10^{3.2} to about 10^{4.5} per egg within a vehicle of approximately 0.05 to 0.1 mL per egg.